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FOREST SURVEY RELEASE NO. 9 A DECEMBER 1937 PROGRESS REPORT

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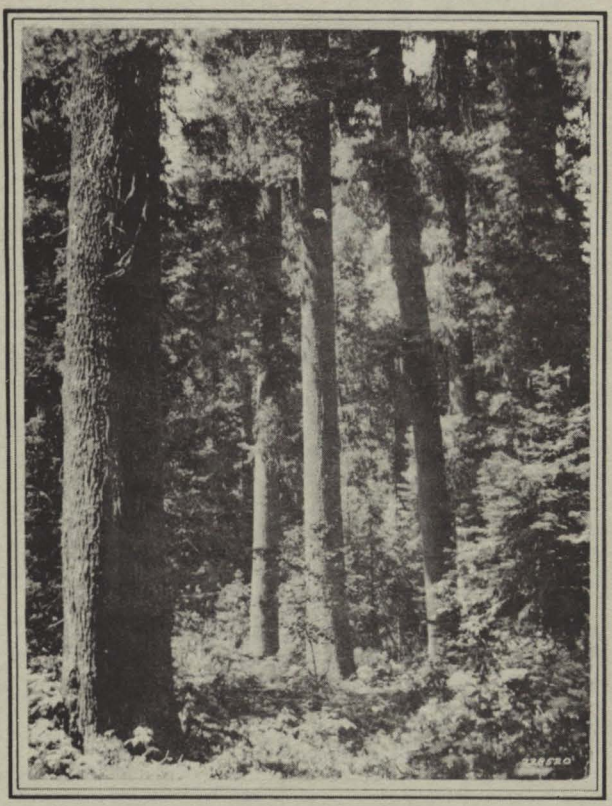
FOREST STATISTICS
KOOTENAI COUNTY, IDAHO

FROM THE INVENTORY PHASE OF THE FOREST SURVEY



U. S. DEPARTMENT OF AGRICULTURE FOREST SERVICE

NORTHERN ROCKY MOUNTAIN
FOREST AND RANGE EXPERIMENT STATION

STEPHEN N. WYCKOFF DIRECTOR
MISSOULA MONTANA

BY FOREST SURVEY STAFF M. BRADNER REGIONAL DIRECTOR

FOREST STATISTICS FOR KOOTENAI COUNTY, IDAHO

From the Inventory Phase of the Forest Survey

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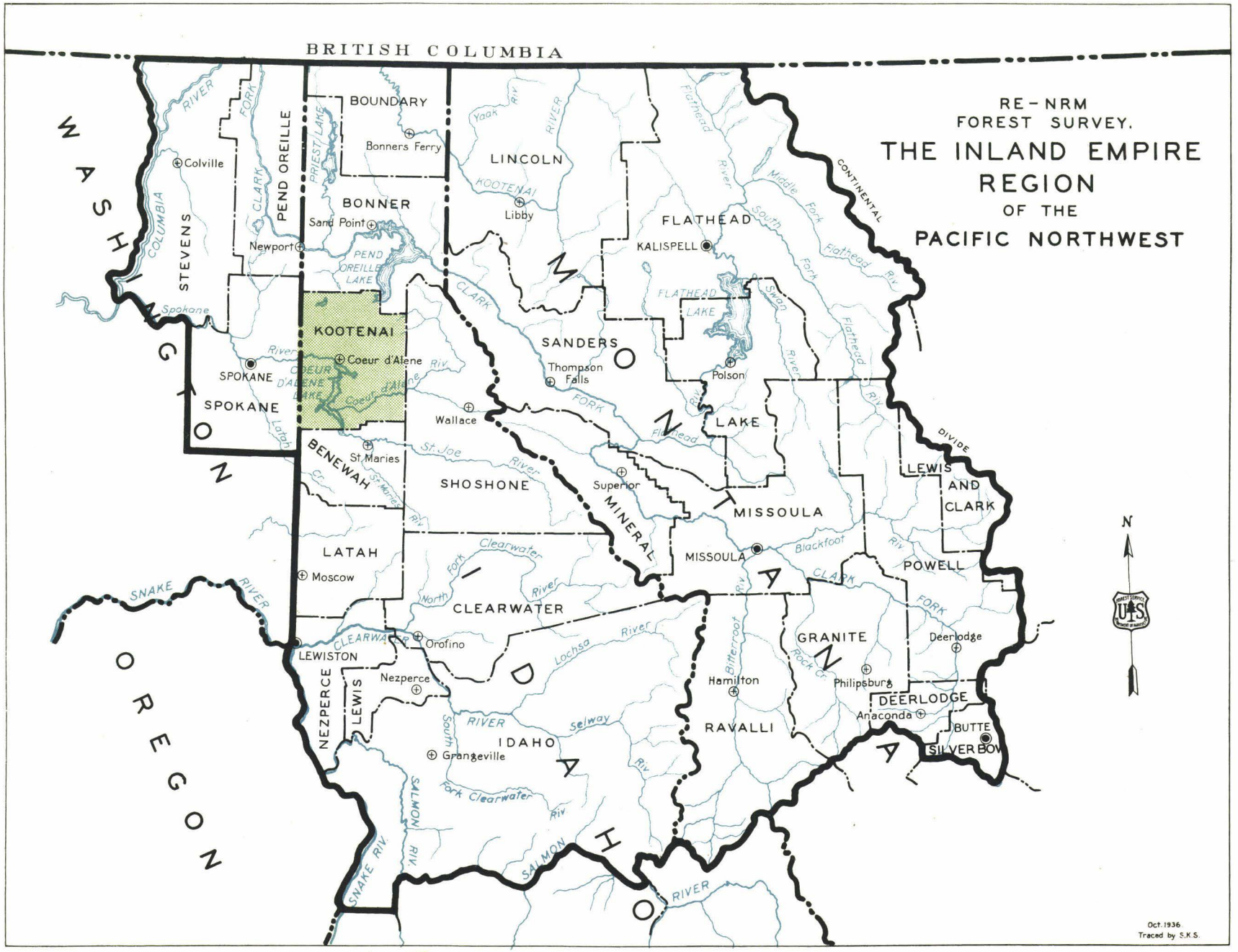

BRITISH COLUMBIA
RE-NRM
FOREST SURVEY.
THE INLAND EMPIRE
REGION
OF THE
PACIFIC NORTHWEST
WASHINGTON
OREGON
IDAHO
MONTANA
BOUNDARY
Bonners Ferry
BONNER
Sand Point
Newport
PEND OREILLE
STEVENS
Colville
KOOTENAI
Coeur d'Alene
SPOKANE
SPOKANE
LINCOLN
Libby
FLATHEAD
KALISPELL
SANDERS
Thompson Falls
Polson
LAKE
MISSOULA
MISSOULA
LEWIS AND CLARK
POWELL
BENEWAH
St Maries
SHOSHONE
Wallace
Superior
LATAH
Moscow
CLEARWATER
Orofino
LEWISTON
NEZPERCE
LEWIS
Nezperce
IDAHO
Grangeville
GRANITE
Philipsburg
Hamilton
Deerlodge
DEERLODGE
Anaconda
BUTTE
SILVER BOW
RAVALLI
PRIEST LAKE
PEND OREILLE LAKE
FLATHEAD LAKE
COEUR D'ALENE LAKE
CLARK FORK
COLUMBIA RIVER
SPOKANE RIVER
SNAKE RIVER
KOOTENAI RIVER
YAAK RIVER
FLATHEAD RIVER
MIDDLE FORK FLATHEAD RIV
SOUTH FORK FLATHEAD RIV
SWAN RIVER
CLARK FORK RIV
THOMPSON FALLS
FLATHEAD RIV
CONTINENTAL DIVIDE
ST JOE RIVER
ST MARIES RIV
MINERAL
NORTH FORK CLEARWATER RIVER
CLEARWATER RIVER
LOCHSA RIVER
SELWAY RIVER
SOUTH FORK CLEARWATER RIV
SALMON RIV
SNAKE RIV
SALMON RIVER
BLACKFOOT RIV
BITTERROOT RIV
ROCK CR
CLARK FORK
N
Oct. 1936
Traced by S.K.S.

RE-NRM
FOREST SURVEY

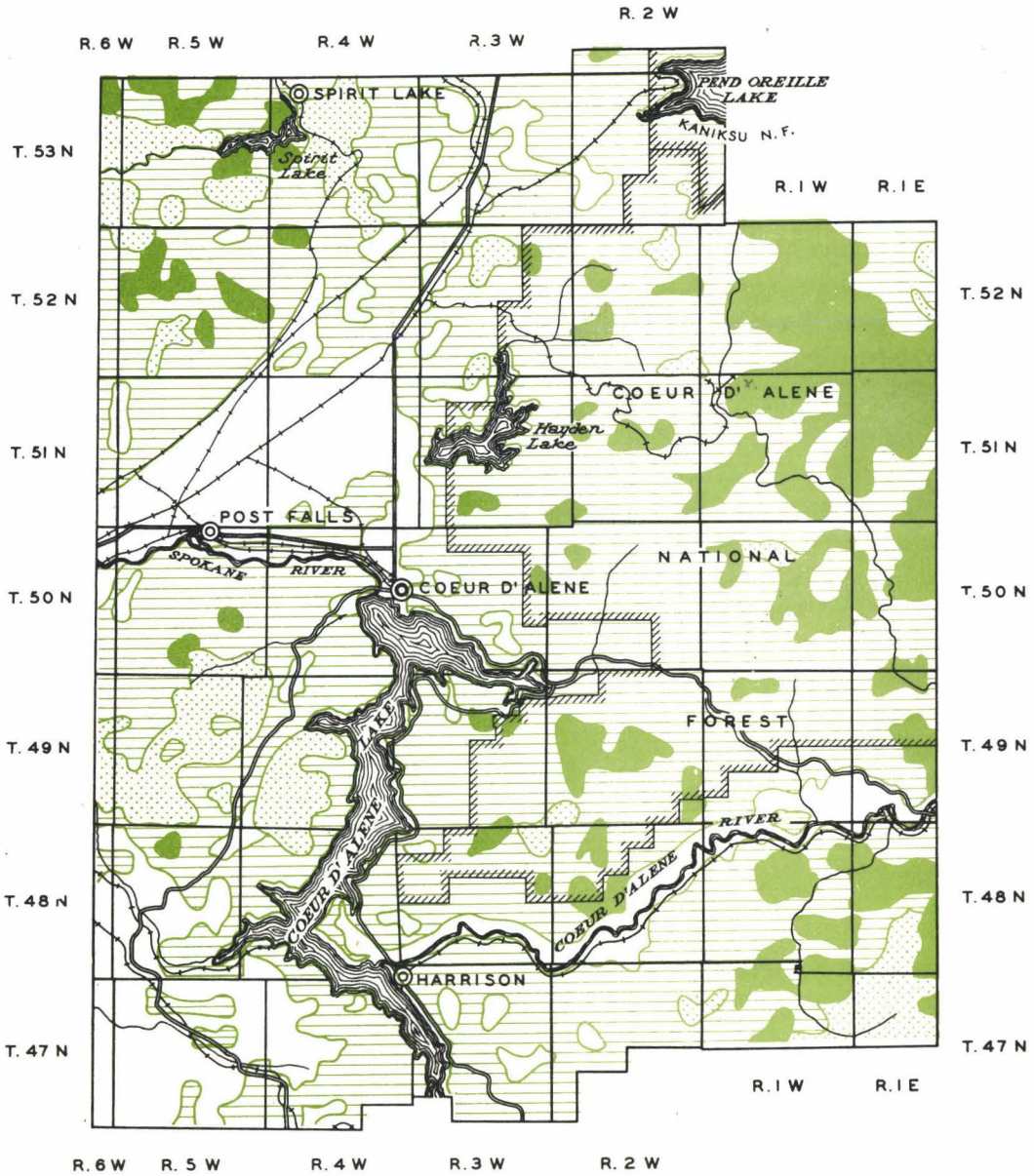
KOOTENAI COUNTY

IDAHO
1937

Scale
1 ½ 0 1 2 3 4 5 Miles

SHOWING GENERAL TYPES

- Principally merchantable timber.
- Principally non-restocked old burns and cutovers; rocky and subalpine areas.
- Principally immature forest; recent burns and cutovers.
- Principally agricultural and grassland.



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RE-NRM
Forest Survey

FOREST STATISTICS FOR KOOTENAI COUNTY, IDAHO

Foreword

Kootenai County occupies a position unique in the annals of lumbering in north Idaho, famous for its forests. For over 50 years the area within the present limits of this county has been the mill center of the Idaho Panhandle, having had, during the past half century, many more lumber mills, large and small, and likewise far greater lumber production than any of the other nine counties in this section of the State. This large industry has played a major part in the establishment and growth of the various communities within the county. By virtue of its strategic position as a lumber manufacturing center, the interests of Kootenai County will always be closely associated with its forests and forest industry.

The forests of this county and the other counties of the Northern Rocky Mountain Region[1/] are being inventoried in a nationwide survey of the forest resources. This, the seventh in a series of county reports, presents a comprehensive summary of the forest inventory for Kootenai County. The county was mapped in 1933 and 1934. Since then the principal factor of change has been logging for which the statistics have been adjusted to show the correct picture at the beginning of 1937.

1/ The three northeastern Washington counties, north Idaho and Montana.

GENERAL CLASSIFICATION OF LAND
KOOTENAI COUNTY, IDAHO

Figure 1.

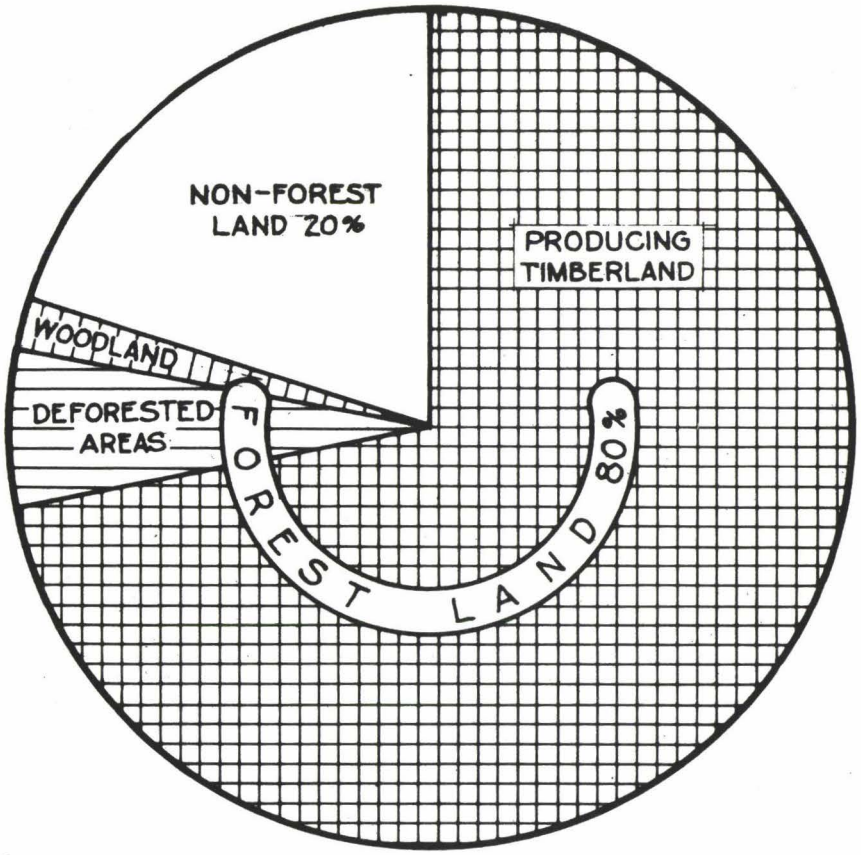


Table 1.

NONFOREST LAND	Area in Acres
Townsites	3,792
Cultivated and Stump Pasture	138,374
Grassland	14,301
Brush	521
Barren	195
Total	157,183
FOREST LAND	
Timberland	
Producing	573,201
Deforested	53,905
Total	627,106
Subalpine	10,254
Rocky Noncommercial	2,256
Total	12,510
Total Forest Land	639,616
GROSS LAND AREA	796,799

General

Kootenai County, Idaho, lies along the Washington line directly east of Spokane, the regional trade center (see map). Eighty percent forested (figure 1), the county is to a large extent mountainous. There is, however, a considerable level area northeast of Post Falls and another in the southwest corner of the county, each containing a substantial acreage of agricultural land. The principal drainage is afforded by the Coeur d'Alene River, Coeur d'Alene Lake, and the Spokane River. A portion of the several townships along the north end of the county, however, drains into the Clark Fork River in Bonner County.

The 1930 census showed a population of 19,469, an increase of approximately 1,600 over the 1920 figure. Coeur d'Alene, the principal town and county seat, had a population in 1930 of 8,297. Spirit Lake, the next in size, contained 1,241 residents in that year.

From the standpoint of transportation facilities, Kootenai County is well served by a number of railroads which include the Northern Pacific Railway, Great Northern Railway, Chicago Milwaukee St. Paul and Pacific Railroad, Oregon Washington Railroad and Navigation Company, and Spokane International Railway. The waterways, Coeur d'Alene Lake and Coeur d'Alene River, have also been important lines of transportation, particularly for forest products.

History of Forest Exploitation

Except for an occasional small settlement, this section of north Idaho was an almost uninhabited wilderness as late as 1880, the first wave of settlers coming in several years later following the completion of the Northern Pacific Railroad. In 1880 Frederick Post finished building a sawmill on the banks of the Spokane River at Post Falls, and in 1882 he constructed a mill at Rathdrum. Another was built at Fish Lake during the same year. These small plants were the first of a number of similar establishments which operated to supply the local demand for building materials. Until as late as 1900 the output of the industry supplied primarily local markets, and for a time the production of lumber was secondary to that of other timber products, namely hewed ties, posts, poles, piling, mine stulls, and shingles. Considering the fact that 2,640 ties are required per mile of track, the size of the hewed tie industry at the time of construction of the early railroads can easily be imagined.

Particularly worthy of mention is the cedar shingle industry which reached a considerable size in the early nineties, when each of the various mill towns had one or more shingle mills in operation. In 1892 there were two shingle mills each at Harrison and Post Falls, one of the mills in the latter town having a daily capacity of 180

thousand shingles. A newspaper account of the industry, in that same year, reports that a strong eastern market was already developing for the Idaho shingle. As a result of this early expansion of the shingle industry, most of the available cedar along the flats of the Coeur d'Alene and St. Joe Rivers was logged before the white pine. Flourishing until 1930, the cedar shingle industry has since declined to insignificant size.

Since the beginning of the century, the production of stulls for the Coeur d'Alene mines has been one of the principal forest activities in the portion of Kootenai County along the Coeur d'Alene River. This industry, engaged in chiefly by small operators, has been a heavy user of the so-called secondary species.

The beginning of the present century marked the turning point in the lumber industry of north Idaho. Between 1900 and 1910 it literally mushroomed from a purely local enterprise to a large scale industry with national markets. Prior to 1911 the principal species cut was ponderosa pine. It was the white pine, however, which offered the principal attraction to eastern capital and lumbermen. This species has since then represented an increasing proportion of the total cut. In 1936 approximately 76 percent of the lumber sawed in north Idaho was white pine.

A recital of the lumber history in Kootenai County can best be divided into two parts as this area has had two

principal lumber manufacturing districts, of which Harrison and Coeur d'Alene have been the centers. Harrison is an example of a town almost solely developed and supported by the lumber industry. It was established shortly after the completion of the Oregon Washington Railroad and Navigation Company to this point in 1889. In 1891 Dick Allen moved the first sawmill (later known as the Grant Mill) to this locality from St. Maries. By the end of 1892 there were several sawmills within Harrison, and during the next twenty years the number of mills and the lumber production were on a steady increase. Kindred industries were also attracted to Harrison and it is said that in 1910 "a mile and a half of the city waterfront presented an unbroken array of sawmills, shingle mills and box factories". It is estimated that these concerns used 75 million feet of logs in 1900 and over 100 million feet in 1910. The Grant, Cameron, St. Joe, Empire, Russell & Pugh, and Export Lumber Companies were a few of the outstanding sawmills which participated in the most interesting history of this community.

After the first of the century a number of other mills were constructed within a few miles of Harrison. Three of the larger of these were located along the Coeur d'Alene River; the Russell & Pugh mill at Springston, the Lane Lumber Company mill at Lane and the mill of the Rose Lake Lumber Company at Rose Lake.

With the approaching exhaustion of the adjacent timber supply the industry in this section began to wane about 1915. Within a few years a number of these concerns passed from the picture and by 1930 only the Russell and Pugh Lumber Company at Springston was in operation in the Harrison section. This mill is still active. The following tabulation graphically depicts the ups and downs of Harrison's lumber industry. The annual capacity for any mill is here considered the same as the highest yearly production.

Harrison and Vicinity in Kootenai County

Year	Number of mills with over 5 million feet annual capacity.	Total annual mill capacity million board ft.
1895	3	27
1900	4	37
1905	5	86
1910	6	97
1915	6	116
1920	4	106
1925	3	94
1930	1	19
1937	1	19

For that portion of Kootenai County north of Coeur d'Alene Lake, the lumber industry has experienced no such great decline. As already mentioned, the first mill was built at Post Falls in 1880 and was followed by a number of other small plants within the next few years. Coeur d'Alene's first sawmill was constructed in 1884 by Glassford and Hawley. This town and other communities in this area did not begin to realize their hopes and dreams of a greatly expanded lumber manufacturing industry, however,

until several years later than Harrison and vicinity. The expansion of manufacturing facilities to their maximum was likewise slower with new concerns constructing sawmills as late as 1922. In this Coeur d'Alene area the industry reached a maximum size three times larger than in the Harrison section during its peak of production. Today, although two large concerns have ceased operation, (the Blackwell and Coeur d'Alene Lumber Companies) this is still the principal lumber manufacturing center of north Idaho. The following tabulation gives the combined capacities for various years of all the mills with an annual capacity of over 5 million feet.

Coeur d'Alene and Vicinity in Kootenai County

Year	Number of mills with over 5 million feet annual capacity	Total annual mill capacity million board ft.
1895	1	5
1900	2	17
1905	8	186
1910	10	314
1915	6	260
1920	7	331
1925	8	370
1930	7	332
1937	6	272

The Atlas Tie Company and Ohio Match Company, the Rutledge, Winton, Coeur d'Alene and Blackwell Lumber Companies, all in or near Coeur d'Alene; the Panhandle Lumber Company, Spirit Lake; and the Post Falls Lumber and Manufacturing Company, Post Falls, have produced the bulk of the lumber output in this section.

The lumber cut of the Kootenai County mills has varied considerably from year to year in response to market conditions. There was, however, a general upward trend of production climaxed in 1925 and since then there has been a definite decline in the yearly cuts. In 1910 lumber production totaled 259 million board feet. The 1925 all time high in lumber output was 369 million board feet. The lowest yearly cut in many years, 92 million board feet, was reported in 1932 as the result of the depression. Improved markets have resulted in a steady rise during the past four years to 210 million board feet in 1936.

Kootenai County is most fortunately located as a manufacturing center, being able, by virtue of favorable transportation facilities, to draw its logs from an extensive area. The several million acres lying in the St. Joe and Coeur d'Alene River drainages in Benewah and Shoshone Counties have supplied many million feet of logs annually for the Kootenai County Mills. In addition, large quantities of logs have been obtained from Spokane and Bonner Counties. More recently these mills have been reaching out in an ever increasing radius for logs. In 1936 logs were transported from as far north as Boundary County, Idaho, and Lincoln County, Montana, and from as far south as Clearwater County, Idaho. Data concerning the source of logs for the various mills are available beginning with 1925. In the twelve years ending with and including 1936, approximately 58 percent of

the logs sawed in local mills has come from other counties whereas only 3 percent of the Kootenai County logs went elsewhere for manufacture. The largest sawlog cut in Kootenai County during this period, 140 million board feet lumber tally, occurred in 1927. In 1932 the sawlog production dropped to 50 million board feet, the lowest in many years. The production rose again to 90 million board feet in 1935 and 80 million board feet in 1936.

In recent years the Panhandle Lumber Company, the Winton Lumber Company and the Ohio Match Company have been the only concerns with large scale logging operations in Kootenai County. The Kootenai County logs sawed in the other mills have been largely purchases from small operators.

Agricultural Development

Approximately 20 percent of the total land area in Kootenai County is nonforest (figure 1). This includes 3,792 acres of townsites, 14,301 acres of natural grassland, 521 acres of brushland and 195 acres of barrens. The bulk of this 20 percent, however, is agricultural, there being 127,573 acres classified as cultivated and 10,801 acres of stump land used for pasture. The former category also includes cleared pasture areas. The farm land of this county if of two origins. A portion has been natural grassland on the edge of the eastern Washington prairie section; the remainder has been cleared from cutover forest area. Recent agricultural expansion has been in the cutover section.

In common with the rest of the Inland Empire, Kootenai County has experienced a considerable recent rise in number of farms and farm population. Settlement by the flood of farmers from the Middle West increased the number of farms from 1,348 in 1930 to 1,762 in 1935, an increase of 31 percent. In view of the fact that many of the cutover-land farms are not self-sustaining, the permanence of the entire increase is doubtful. This doubt is upheld by the fact that the farms in this area decreased in number from 1,396 to 1,288 between 1920 and 1925.

Dependent Population

The industrial structure of Kootenai County has been primarily founded on its farms and forests. It is estimated that the county is over four-fifths supported by these two industries. Forest industry in this case includes a considerable number employed in the different phases of forest improvement and protection work, etc., in addition to those engaged in lumbering and allied industries.

Almost one-third of the gainfully employed persons in the county are occupied in enterprise of a secondary nature. These are the business, professional and trades people, who receive their support from the money spent by the workers in basic industry in return for services rendered. Stated a little differently, basic industries, such as lumbering, agriculture and mining, are the reason for the community,

whereas the community is the reason for the grocer, the doctor, and the like. It may be assumed that in general each of the basic industries supports a portion of the secondary industries in direct relation to its relative size. Following this line of reasoning, and making allowance for trade from outside the county, it is estimated that in 1925, 54 percent of the population was directly and indirectly dependent upon forest industry and 33 percent upon agriculture; 16 persons being employed in forest industry for every 10 persons in the latter.

The problem of increased unemployment complicates an estimation of dependence in 1936. At this time there was greater idleness among logging and lumber workers, a considerable employment in emergency relief work, and an increase in farms and farm workers. It is calculated that in this year there were the equivalent of only 8 full time workers in forest industry to 10 in agriculture.

As the decrease in lumber production was followed by the substitution of partial for full time employment for many along with total unemployment for others, a comparison of the various years must be made on the basis of the full time workers that might have been employed if work had been concentrated. On this basis, the equivalent of 3,000 full time workers were employed by forest industry in 1925, 750 in 1932, and 2,000 in 1936.

Inasmuch as the total revenue from the newer farms has been low, the increase in farms has fallen far short of financially compensating for the losses from a declining lumber industry.

Recreational Development

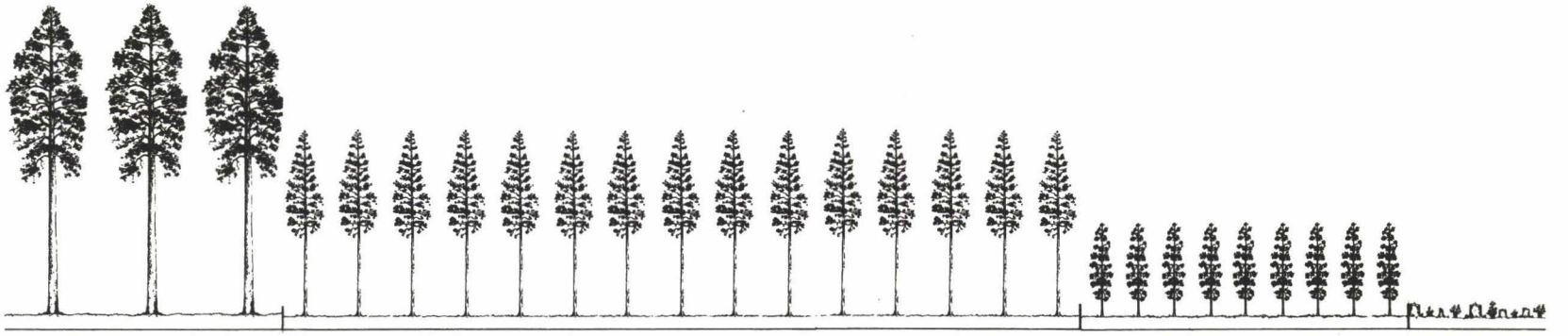
Enjoying a proximity to Spokane and an advantageous location on a transcontinental highway, the recreational facilities have proven a growing attraction in Kootenai County. The wooded shorelines of Coeur d'Alene, Hayden and several smaller Lakes are the sites of many summer homes, and several camps. The possibilities for expansion of these summer colonies are sufficient to give the forest land along these lakes a recreational worth far exceeding any commercial value. In the forested mountain country, providing a haven for the hunter, fisherman and camper, several loop roads have been developed which offer the opportunity for pleasant and picturesque drives of a few hours in length. Lakes, streams, mountains and forests---these are scenic assets which, properly protected, can pay greatly in real and pleasure dollars.

Present Stands

Kootenai County has 639,616 acres of forest land with a wide range of immediate and potential values. The entire 640 thousand acres have a high value for watershed protection and stream flow control. For a considerable mountain and lakeside area there is the added worth given by recreational possibilities. From the lumbering standpoint

Fig. 2

CHARACTER OF TIMBERLAND COVER IN ZONES ONE AND TWO — KOOTENAI COUNTY, IDAHO
625,506 ACRES



SAWLOG STANDS *
106,218 Acres

POLE STANDS**
331,384 Acres

SEEDLING AND SAPLING STANDS*** 134,784 Acres

DEFORESTED
53,120 Acres

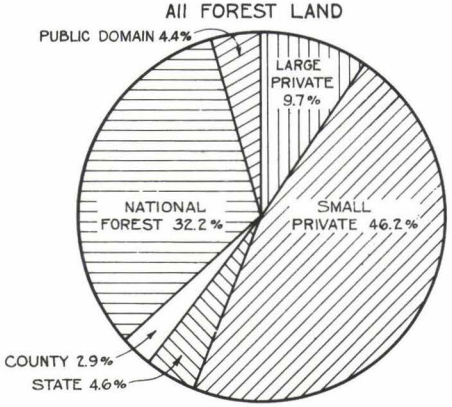
*Including Merchantable Cedar-White Fir Pole Stands.

**Including all immature Cottonwood Stands.

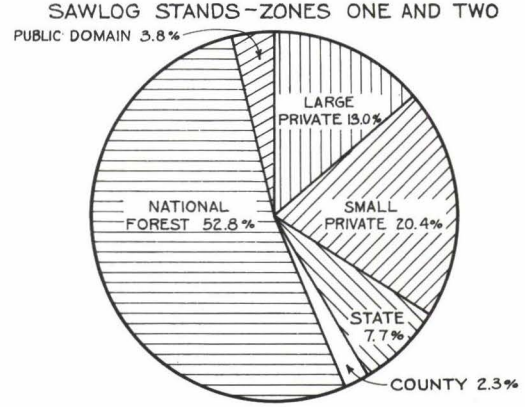
***Including Recent Burns and Cutovers.

Fig. 3

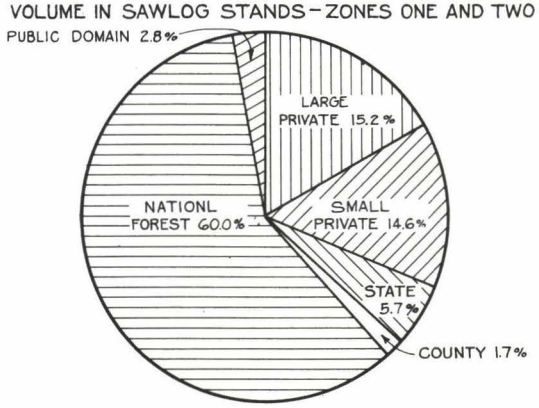
OWNERSHIP OF FOREST LAND AND TIMBER — KOOTENAI COUNTY, IDAHO



639,616 Acres.



106,218 Acres.



1,350,922,000 BOARD FEET

FOR DEFINITION OF ZONES SEE GLOSSARY

however, only the area which contains white pine and ponderosa pine sawlog stands, possesses any very large immediate commercial value, which area is less than one-eighth of the total.

There are 10,254 acres with low value subalpine stands, and 2,256 acres which are noncommercially steep or rocky. Approximately 8 percent or 53,905 acres of the total forest land is deforested as the result of old fires and logging, and a total of 33,758 acres is classed as recent burns and cutovers, including recently cut and burned areas in an indefinite status at the time of mapping and approximately 11 thousand acres logged since the type mapping in 1933 and 1934.

An exceptionally high proportion (331,777 acres) of the timberland area contains pole stands ranging from six inches in diameter to merchantable size. There are 101,026 acres of seedling and sapling stands predominantly less than six inches in diameter, and 106,640 acres of sawlog stands. These timberland figures include a small acreage of economically inaccessible (zone 3) stands. The accessible areas are graphically shown in figure 2. Only a portion of the 106,640 acres of sawlog stands is commercially loggable at the present time as many of these stands are primarily composed of secondary species.

Although the minor species represent much more than half of the total sawlog volume in this and other north Idaho

counties, lack of sufficient market for them has resulted in an annual cut in recent years of over four-fifths white pine and ponderosa pine. Since the white and ponderosa pine sawlog stands contain a very high percentage of minor species (table 5), the small volume of the minor species produced may be obtained entirely within the two major types, thereby miminizing the immediate commercial importance of a large sawlog area. There are 50,562 acres of sawlog stands in the white pine type and 29,766 acres of sawlog stands in the ponderosa pine type all of which are more or less accessible from an economic standpoint. These figures include, however, 2,699 acres and 5,100 acres respectively (table 2) of zone two stands which, it is thought, will not be loggable without an increase in stumpage values.

Timber Volumes

The previously mentioned sawlog stands of the white pine and ponderosa pine types contain 823 million board feet and 263 million board feet respectively of timber (table 5). However, only 45 percent or 372 million board feet of the volume in white pine sawlog stands is white pine, and 63 percent or 166 million board feet of the volume in ponderosa pine sawlog stands is ponderosa pine. Continuation of the cutting of these two species at the rate of the past few years would spell their commercial exhaustion in a comparatively short time. The fact that much of the white pine is in the Coeur d'Alene National Forest, which

is operating on a much smaller and sustaining cut, precludes the possibility of commercial exhaustion of this species, but also indicates that the rate of depletion must soon decline.

The sawlog stands of Kootenai County have been found to contain a total of 1,354 million board feet. Of this total 389 million board feet are white pine and 183 million board feet are ponderosa pine. The volume of each species is graphically shown in figure 5.

Following are given the average volumes per acre in the various timber types of sawlog size.

All types	12,700	board	feet	per	acre,	all	species
White pine type	16,300	"	"	"	"	"	"
Ponderosa pine type	8,800	"	"	"	"	"	"
Larch-Douglas fir & Douglas fir type	10,000	"	"	"	"	"	"
Other types	12,000	"	"	"	"	"	"

In many young stands there are scattered trees of sawlog size. Although the volume in these scattered trees is not very large when compared with that of the sawlog stands, it has considerable value in that, being easily reached, it has furnished a large cut of fuelwood annually. The Forest Survey has estimated a total of 150 million board feet log scale in such trees (table 3).

The total net board foot volume figures given in this report are considerably higher than any previous estimates. They include, as already mentioned, the volumes in scattered trees on cutover and burned areas and the volumes in

inaccessible and unloggable stands. Though the standards of tree merchantability set up for the Forest Survey compare closely with the actual utilization for such species as western white pine, ponderosa pine and lodgepole pine, they include trees of smaller diameter than those usually cut in the case of the less valuable sawlog species such as hemlock and Douglas fir. As an example, the Forest Survey includes all sound hemlock trees larger than 13 inches in diameter breast high that have two 16 foot logs to an eight-inch top and are physically suitable for lumber, while private cruises seldom include hemlock trees of such small diameter and height.

Forest Ownership

The forest ownership situation in Kootenai County, shown graphically in figure 3, indicates that a curtailment in the logging phase of the lumber industry may soon be expected. Although only 32.2 percent of the total forest area is National Forest, 52.8 percent of the accessible sawlog area and 60 percent of the timber in the accessible sawlog stands is so owned. Going one step farther with these calculations, it is noted that 79 percent of the accessible white pine sawlog stand area is in National Forest ownership. On the other hand, although a large percentage of the white pine cut has come from National Forest land in the past, a maximum cut of 15 million feet of white pine per year has been set, in the interest of sustained yield, for the entire

Coeur d'Alene National Forest which lies in Shoshone and Kootenai Counties. With this in mind, it is apparent that the 66 million feet of privately owned white pine timber will not last long if the present yearly drain for this species of 38 million feet log scale (1935-1936) is maintained.

An index of the operative value of the gross holdings in each ownership class is obtained by the following comparison.

Ownership class	Total forest area	Area of sawlog stands	Percentage of sawlog area in total forest holdings.
Large private	61,888	13,836	22
Small private	295,482	21,862	7
State	29,293	8,179	28
County	18,696	2,410	13
National Forest	205,880	56,139	27
Public Domain	28,377	4,214	15
All owners	639,616	106,640	17

Sustained Yield Possibilities

Since the day the first large mill operated in north Idaho, the one never realized hope and expectation has been for the development of an adequate and profitable market for the secondary species, making possible both a more complete utilization of the forest resources and more desirable timber management policies. In the past few years the tendency has been in the opposite direction and forest owners have been forced to log less and leave more sawlog timber of these species. Concentration of logging upon the two major tree

Fig. 4

ACTUAL AND DESIRABLE DISTRIBUTION OF AGE CLASSES IN TIMBERLANDS ZONES ONE AND TWO — KOOTENAI COUNTY, IDAHO 625,310 ACRES

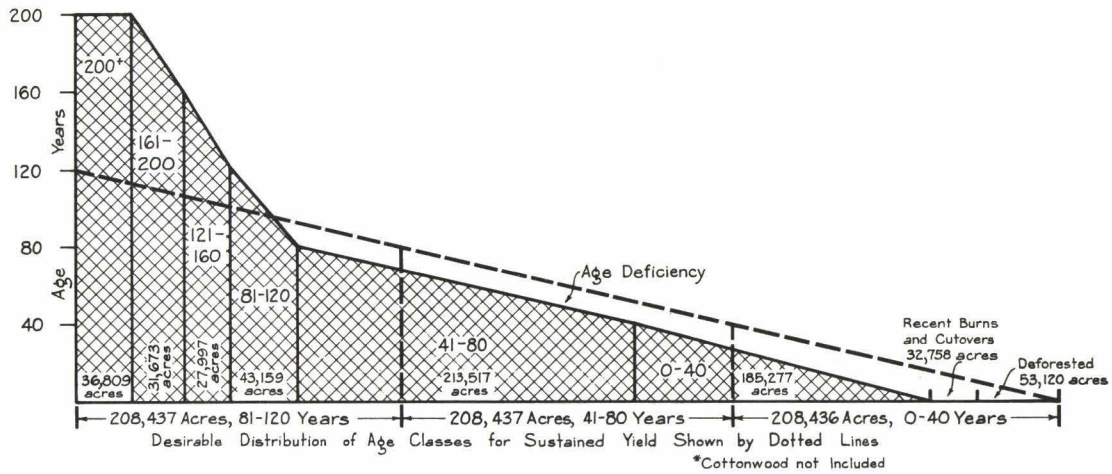


Fig. 5

VOLUME IN TIMBER STANDS BY SPECIES KOOTENAI COUNTY, IDAHO

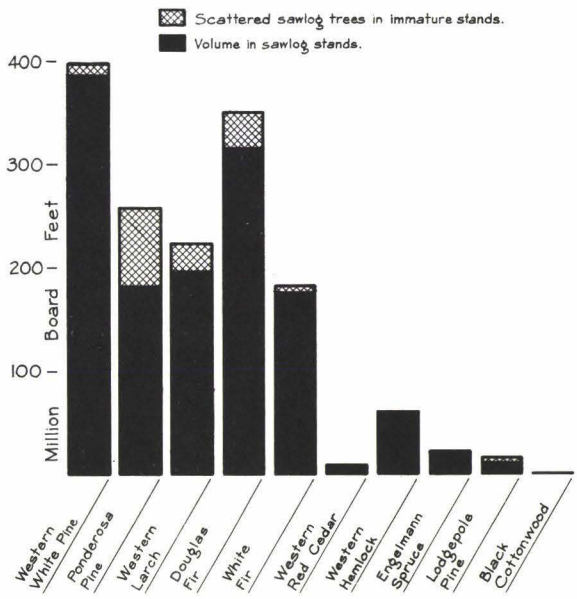
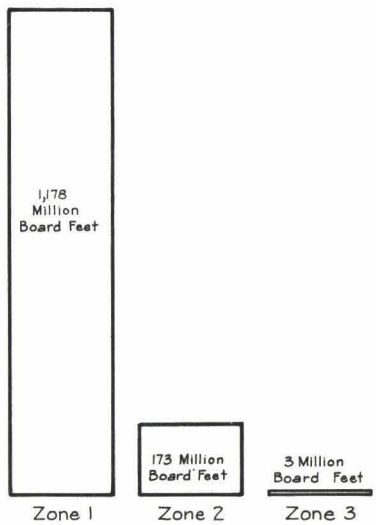


Fig. 6

VOLUME IN SAWLOG STANDS BY ZONES KOOTENAI COUNTY, IDAHO



FOR DEFINITION OF ZONES SEE GLOSSARY

species has aggravated the ill effects of the overcutting which has characterized the past 25 years. It seems quite possible, however, that markets for the minor species will improve as the virgin areas grow less. Favored by nearness to market and constantly improved transportation facilities, Kootenai County would be one of the first to benefit from any such upturn in conditions.

The wisdom inherent to a policy of keeping the annual log production at a point within which it can be permanently maintained is parallel to the wisdom of presenting a community with a large amount of money as an annuity rather than a lump sum. Idle mills are a natural consequence of unrestricted exploitation, and mill abandonment is followed likewise by the economic evils attendant on decreased employment and a reshuffling of population. Stabilized industry and community depend entirely upon a stabilized production of raw materials.

Although good forest practice permits several cutting methods, the choice of which is dependent upon a number of silvicultural and economic factors, a comparison is made in figure 4 of actual and desirable stand conditions, based on a 120 year rotation in which one one-hundred-twentieth of the area is logged annually and each area logged once every 120 years. In any type of constructive timber management, an equal representation of age classes is more important than a large area of merchantable timber. In figure 4,

comparing the actual age class distribution of accessible timber stands with the minimum desirable for this type of management, (shown by dotted lines) it can be seen that there is an age deficit in growing stock, with an insufficiency of certain age classes due to the excessive logging rate of the past.

Figure 4 is based on the entire accessible timber area in Kootenai County, while logging is at present principally confined to white pine and ponderosa pine stands. Analysis of the timber area of these two major types alone, in the same manner, reveals a similar maldistribution. This type of calculation is conservative in that it assumes no advance growth is present after logging; whereas the cutover areas in general have contained residual stands ranging from seedlings to sawlogs. Without these advance stands the outlook in Kootenai County would be much less satisfactory than it is.

An analysis of the forest statistics for Kootenai County, plus a consideration of current trends in log and lumber production, indicate that the two phases of the lumber industry may be expected to progress along different routes in the coming years. Evidences are that lumber manufacturing in Kootenai County may not decrease correspondingly as local log production is curtailed since there has been a growing tendency on the part of local concerns to reach farther out for logs. If they can successfully compete with

other operators for the timber elsewhere in the Inland Empire, it may mean that the saw will continue to hum unabated here for a number of years. So many "ifs" are involved, however, that no prophecy can be more than a guess. Nevertheless, without a fundamental change in management practice, this development can only postpone an inevitable decline, as the solution lies as much as ever in effecting an orderly utilization of the forest resources.

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Designed to meet the many and varied needs for information, a wealth of data is at hand for each county. In this publication, it has been necessary to sacrifice some of the detail to brevity, and consequently the information herein is generalized into the more important classifications. Subsequent reports for the economic unit, of which Kootenai County is a part, will cover the material in more detail, going much farther than this preliminary analysis in making interpretations based on various economic considerations.

To facilitate the most intelligent use of the tables in this publication, the methods followed and the types, terms, and classifications used in collecting and presenting these data are described in a supplementary report.[2/] Brief definitions of the more important of these are contained in the glossary.

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The figures in this report are preliminary and subject to correction in future releases.

INVENTORY PHASE --KOOTENAI COUNTY, IDAHO

G.M. DeJarnette and P.D. Kemp, in Charge

Type Mapping	Check Cruising	Compilation	
L.P. Neff	P.N. Pratt	O.B. Johnson	M.O. Moore
C.S. Thornock	G.N. Allman	R.J. Gallup	J.M. Honeywell
F.B. Casler	R.J. Smith	A.A. Flint	W.F. Gunterman
R. Ahlskog		E.G. Rutquist	A.W. Carlson
B.A. Nugent		W.W. Ensign	R.L. Conn
J.M. Honeywell		H.O. Ficke	B.N. MacLean
L.J. Cummings		J.L. Frykman	M.E. Metcalf
H.O. Ficke		H.B. Hawk	H.J. Pissot
J. Rodner		W.L. Royer	
S. Larson			
J.S. Frykman			

Report writing - S.B. Hutchison

2/ Forest Survey Release No. 3. The Inventory Phase of the Forest Survey for the Northern Rocky Mountain Region -- A Definition of the Procedure, Terms, and Classifications.

Table 2.- CLASSIFICATION OF FOREST LAND TYPES ACCORDING TO OWNERSHIP, ZONE AND SIZE CLASS
KOOTENAI COUNTY, IDAHO

Area in Acres

(Continued on next page)

Timber Type	Zone	Large Private					Small Private					State 1/					County				
		Sawlog	Pole	Seedling and sapling	Recent burns and cutovers	Total	Sawlog	Pole	Seedling and sapling	Recent burns and cutovers	Total	Sawlog	Pole	Seedling and sapling	Recent burns and cutovers	Total	Sawlog	Pole	Seedling and sapling	Recent burns and cutovers	Total
Western white pine	1	4,516	4,444	2,355	5,205	16,520	2,111	16,341	6,956	1,404	26,812	1,966	2,575	705	146	5,392	286	976	743	74	2,079
	2	359	3	327	161	850	273	736	81	87	1,177	192	362	93		647	313	19	82		414
	3																				
	Total	4,875	4,447	2,682	5,366	17,370	2,384	17,077	7,037	1,491	27,989	2,158	2,937	798	146	6,039	599	995	825	74	2,493
Ponderosa pine-pure	1	171	2,992	601	8	3,772	2,934	6,738	1,322	154	11,148	129	795	22	84	1,030	217	362	138		717
	2	65				65	732				732	256				256	6				6
	Total	236	2,992	601	8	3,837	3,666	6,738	1,322	154	11,880	385	795	22	84	1,286	223	362	138		723
Ponderosa pine-mixed	1	2,644	5,493	847	967	9,951	8,423	98,401	15,803	3,478	126,105	2,986	4,406	613	104	8,109	475	3,114	606	181	4,376
	2	386	53		132	571	1,176	344	69	149	1,738	1,242	2	4	28	1,276	210	16	48		274
	Total	3,030	5,546	847	1,099	10,522	9,599	98,745	15,872	3,627	127,843	4,228	4,408	617	132	9,385	685	3,130	654	181	4,650
Ponderosa pine-Total	1	2,815	8,485	1,448	975	13,723	11,357	105,139	17,125	3,632	137,253	3,115	5,201	635	188	9,139	692	3,476	744	181	5,093
	2	451	53		132	636	1,908	344	69	149	2,470	1,498	2	4	28	1,532	216	16	48		280
	Total	3,266	8,538	1,448	1,107	14,359	13,265	105,483	17,194	3,781	139,723	4,613	5,203	639	216	10,671	908	3,492	792	181	5,373
Larch-Douglas fir	1	4,306	5,894	1,707	463	12,370	2,762	44,984	11,181	2,318	61,245	406	2,265	1,019	470	4,160	356	2,560	1,422	3	4,341
	2	520	1,441	44		2,005	1,939	3,806	514	8	6,267	481	1,418	180		2,079	474	549	149		1,172
	3						209				209										
	Total	4,826	7,335	1,751	463	14,375	4,910	48,790	11,695	2,326	67,721	887	3,683	1,199	470	6,239	830	3,109	1,571	3	5,513
Hemlock-white fir	1	365	598		32	995	472	1,662	227		2,361		10			10	11	12	1		24
	2		48			48	10	61			71		1			1		70			70
	3																				
	Total	365	646		32	1,043	482	1,723	227		2,432		11			11	11	82	1		94
Douglas fir	1	104	2,270	365		2,739	166	7,993	1,388	39	9,586	105	592	126		823	22	310	2		334
	2	32	259	174		465	325	644	133	11	1,113	254	74			328	36	93			129
	3						37				37										
	Total	136	2,529	539		3,204	528	8,637	1,521	50	10,736	359	666	126		1,151	58	403	2		463
Engelmann spruce	1																				
Lodgepole pine	1		459	413		872		2,317	11,307		13,624			646		646		208	503		711
	2							279			279		44	180		224		17			17
	Total		459	413		872		2,596	11,307		13,903		44	826		870		225	503		728
Western red cedar 2/	1													26		26			25		25
Cedar-white fir 3/	1	338	571	355	15	1,279	165	1,495	172	56	1,888	154	117	32		303	4	151	69		224
	2	30				30	62				62	8				8					
	Total	368	571	355	15	1,309	227	1,495	172	56	1,950	162	117	32		311	4	151	69		224
Cottonwood 4/	1						66	99			165							31			31
Total producing timberland	1	12,444	22,721	6,643	6,690	48,498	17,099	180,030	48,356	7,449	252,934	5,746	10,760	3,189	804	20,499	1,371	7,724	3,509	258	12,862
	2	1,392	1,804	545	293	4,034	4,517	5,870	797	255	11,439	2,433	1,901	457	28	4,819	1,039	764	279		2,082
	3						246				246										
	Total	13,836	24,525	7,188	6,983	52,532	21,862	185,900	49,153	7,704	264,619	8,179	12,661	3,646	832	25,318	2,410	8,488	3,788	258	14,944
Nonrestocked old burns and cutovers	1					9,031					28,111					3,114					2,899
	2					210					526					247					151
	3															573					
	Total					9,241					28,637					3,934					3,050
Total timberland	1					57,529					281,045					23,613					15,761
	2					4,244					11,965					5,066					2,233
	3										246					573					
	Total					61,773					293,256					29,252					17,994
Subalpine Rocky noncommercial	1										1,135					25					20
	2																				23
	3					115					1,091					16					659
	Total					115					2,226					41					702
GROSS FOREST AREA	1					57,529					282,180					23,638					15,781
	2					4,244					11,965					5,066					2,256
	3					115					1,337					589					659
	Total					61,888					295,482					29,293					18,696

1/ Available for conversion.
2/ For the western red cedar type pole, seedling and sapling stands are grouped in one class.
3/ In this table merchantable cedar-white fir pole stands are classed with sawlog stands.
4/ All immature cottonwood stands are grouped in one class.

Data as of 1937

RE-NRM
Forest Survey

Table 2.- CLASSIFICATION OF FOREST LAND TYPES ACCORDING TO OWNERSHIP, ZONE AND SIZE CLASS
KOOTENAI COUNTY, IDAHO

(continued from preceding page)

Area in Acres

Timber Type	Zone	National Forest: Available for conversion: Sawlog	Pole	Seedling and sapling	Recent burns and cutovers	Total	National Forest: Reserved: Sawlog	Pole	Total	Public Domain: Sawlog	Pole	Seedling and sapling	Recent burns and cutovers	Total	Total: Sawlog	Pole	Seedling and sapling	Recent burns and cutovers	Total	Total available for conversion: Sawlog	Pole	Seedling and sapling	Recent burns and cutovers	Total
Western white pine	1	38,582	37,654	9,651	16,429	102,316	256	80	336	146	1,046	127		1,319	47,863	63,116	20,537	23,258	154,774	47,607	63,036	20,537	23,258	154,438
	2	1,123	2,481	2,592	140	6,336				439	616	126		1,181	2,699	4,217	3,301	388	10,605	2,699	4,217	3,301	388	10,605
	3		71			71										71			71		71			71
	Total	39,705	40,206	12,243	16,569	108,723	256	80	336	585	1,662	253		2,500	50,562	67,404	23,838	23,646	165,450	50,306	67,324	23,838	23,646	165,114
Ponderosa pine-pure	1	1,977	53			2,030				145				145	5,573	10,940	2,083	246	18,842	5,573	10,940	2,083	246	18,842
	2									127				127	1,186				1,186	1,186				1,186
	Total	1,977	53			2,030				272				272	6,759	10,940	2,083	246	20,028	6,759	10,940	2,083	246	20,028
Ponderosa pine-mixed	1	3,733	6,747	846	557	11,883				832	5,438	1,402	26	7,698	19,093	123,599	20,117	5,313	168,122	19,093	123,599	20,117	5,313	168,122
	2	409	175			584				491	143	161	18	813	3,914	733	282	327	5,256	3,914	733	282	327	5,256
	Total	4,142	6,922	846	557	12,467				1,323	5,581	1,563	44	8,511	23,007	124,332	20,399	5,640	173,378	23,007	124,332	20,399	5,640	173,378
Ponderosa pine-Total	1	5,710	6,800	846	557	13,913				977	5,438	1,402	26	7,843	24,666	134,539	22,200	5,559	186,964	24,666	134,539	22,200	5,559	186,964
	2	409	175			584				618	143	161	18	940	5,100	733	282	327	6,442	5,100	733	282	327	6,442
	Total	6,119	6,975	846	557	14,497				1,595	5,581	1,563	44	8,783	29,766	135,272	22,482	5,886	193,406	29,766	135,272	22,482	5,886	193,406
Larch-Douglas fir	1	4,964	14,378	9,820	327	29,489				401	1,667	824		2,892	13,195	71,748	25,973	3,581	114,497	13,195	71,748	25,973	3,581	114,497
	2	2,721	9,624	6,066	143	18,554				1,158	2,767	1,000		4,925	7,293	19,605	7,953	151	35,002	7,293	19,605	7,953	151	35,002
	3									118	300			418	327	300			627	327	300			627
	Total	7,685	24,002	15,886	470	48,043				1,677	4,734	1,824		8,235	20,815	91,653	33,926	3,732	150,126	20,815	91,653	33,926	3,732	150,126
Hemlock-white fir	1	689	1,174	75	115	2,053				2		32		34	1,539	3,456	335	147	5,477	1,539	3,456	335	147	5,477
	2	59	314			373				47	8			55	116	502			618	116	502			618
	3		22			22										22			22		22			22
	Total	748	1,510	75	115	2,448				49	8	32		89	1,655	3,980	335	147	6,117	1,655	3,980	335	147	6,117
Douglas fir	1	456	7,243	1,363	107	9,169				39	631	3		673	892	19,039	3,247	146	23,324	892	19,039	3,247	146	23,324
	2	783	6,037	1,295	39	8,154				198	11			209	1,628	7,118	1,602	50	10,398	1,628	7,118	1,602	50	10,398
	3									58				58	95				95	95				95
	Total	1,239	13,280	2,658	146	17,323				295	642	3		940	2,615	26,157	4,849	196	33,817	2,615	26,157	4,849	196	33,817
Engelmann spruce	1				80	80												80	80				80	80
Lodgepole pine	1	74	264	713		1,051									74	3,248	13,582		16,904	74	3,248	13,582		16,904
	2	74	329	1,034		1,437					391	55		446	74	1,060	1,269		2,403	74	1,060	1,269		2,403
	Total	148	593	1,747		2,488					391	55		446	148	4,308	14,851		19,307	148	4,308	14,851		19,307
Western red cedar 2/	1			15		15											66		66			66		66
Cedar-white fir 3/	1		374	47		421				10	165	4		179	671	2,873	679	71	4,294	671	2,873	679	71	4,294
	2	239				239				3				3	342				342	342				342
	Total	239	374	47		660				13	165	4		182	1,013	2,873	679	71	4,636	1,013	2,873	679	71	4,636
Cottonwood 4/	1														66	130			196	66	130			196
Total producing timberland	1	50,475	67,887	22,530	17,615	158,507	256	80	336	1,575	8,947	2,392	26	12,940	88,966	298,149	86,619	32,842	506,576	88,710	298,069	86,619	32,842	506,240
	2	5,408	18,960	10,987	322	35,677				2,463	3,936	1,342	18	7,759	17,252	33,235	14,407	916	65,810	17,252	33,235	14,407	916	65,810
	3		93			93				176	300			476	422	393			815	422	393			815
	Total	55,883	86,940	33,517	17,937	194,277	256	80	336	4,214	13,183	3,734	44	21,175	106,640	331,777	101,026	33,758	573,201	106,384	331,697	101,026	33,758	572,865
Nonrestocked old burns and cutovers	1					3,277								1,220					47,652					47,652
	2					3,352								962					5,468					5,468
	3													212					785					785
	Total					6,629								2,414					53,905					53,905
Total timberland	1					161,784			336					14,160					554,228					553,892
	2					39,029								8,741					71,278					71,278
	3					93								688					1,600					1,600
	Total					200,906			336					23,589					627,106					626,770
Subalpine, Rocky noncommercial	1					525													1,705					1,705
	2					105													128					128
	3					4,008								4,788					10,677					10,677
	Total					4,638								4,788					12,510					12,510
GROSS FOREST AREA	1					162,309			336					14,160					555,933					555,597
	2					39,134								8,741					71,406					71,406
	3					4,101								5,476					12,277					12,277
	Total					205,544			336					28,377					639,616					639,280

1/ Available for conversion.
2/ For the western red cedar type pole, seedling and sapling stands are grouped in one class.
3/ In this table merchantable cedar-white fir pole stands are classed with sawlog stands.
4/ All immature cottonwood stands are grouped in one class.

Data as of 1937

RE-NRM
Forest Survey

Table 3.- TOTAL VOLUME OF SAWTIMBER BY TYPE OF STAND, SPECIES, AND OWNERSHIP
KOOTENAI COUNTY, IDAHO

Ownership class	Volume by species - thousand board feet net log scale (Scribner Dec. C)											Pieces
	Western white pine	Ponderosa pine	Western larch	Douglas fir	White° fir	Western red cedar	Western hemlock	Engelmann spruce	Lodgepole pine	Northern black cottonwood	Total	Cedar poles
	Sawlog Stands°° (all zones)											
Large Private	48,669	19,508	35,904	51,721	38,478	2,542	6,650	1,002	1,319		205,793	18,479
Small Private	17,464	79,620	28,606	51,224	18,502	1,303	2,256	174	212	198	199,559	9,567
State	15,140	19,784	8,787	22,614	7,514	1,418	974	201	36		76,468	9,258
County	2,890	5,447	5,061	6,232	2,118	86	232	68	401		22,535	806
National Forest (available)	297,750	46,287	109,751	168,114	106,514	2,996	45,048	20,387	8,766		805,613	13,785
National Forest (reserved)	2,801		202	426	751		293	130			4,603	29
Public Domain	3,929	12,700	6,028	12,507	4,047	194	84	27	74		39,590	1,141
Total	388,643	183,346	194,339	312,838	177,924	8,539	55,537	21,989	10,808	198	1,354,161	53,065
Available for conversion	385,842	183,346	194,137	312,412	177,173	8,539	55,244	21,859	10,808	198	1,349,558	53,036
	Scattered Sawlog Trees in Immature Stands (all zones)											
Large Private	518	7,229	1,927	2,611	174	6	31	4	225		12,725	
Small Private	2,173	52,877	12,366	17,171	959	24	85	15	3,243	17	88,930	
State	277	3,035	1,015	1,196	94	3	11	2	193		5,826	
County	158	2,194	820	913	68	2	7	1	160	6	4,329	
National Forest	3,459	6,733	9,173	11,510	993	49	134	32	611		32,694	
Public Domain	179	2,858	1,092	1,355	89	2	8	1	148		5,732	
Total	6,764	74,926	26,393	34,756	2,377	86	276	55	4,580	23	150,236	
Grand Total	395,407	258,272	220,732	347,594	180,301	8,625	55,813	22,044	15,388	221	1,504,397	53,065

° Includes some alpine fir.
°° Includes the volume in cedar-white fir merchantable pole stands.

Data as of 1937

RE-NRM
Forest Survey

Table 4.- VOLUME OF SAWTIMBER IN SAWLOG STANDS° BY ZONE, OWNERSHIP AND SPECIES
KOOTENAI COUNTY, IDAHO

Ownership class	Volume by species - thousand board feet net log scale (Scribner Dec. C)											Pieces
	Western white pine	Ponderosa pine	Western larch	Douglas fir	White°° fir	Western red cedar	Western hemlock	Engelmann spruce	Lodgepole pine	Northern black cottonwood	Total	Cedar poles
	Zone 1											
Large Private	43,541	17,179	32,383	47,171	35,609	2,438	6,093	1,002	1,319		186,735	18,101
Small Private	14,959	63,230	21,629	35,998	15,832	1,253	2,142	170	169	198	155,580	8,787
State	14,050	12,431	5,717	14,261	6,766	1,327	939	201	8		55,700	8,129
County	1,749	4,300	2,133	3,112	1,290	74	205	68	401		13,332	588
National Forest (available)	289,881	44,454	100,233	143,550	99,367	2,966	42,033	17,773	7,608		747,865	13,696
National Forest (reserved)	2,801		202	426	751		293	130			4,603	29
Public Domain	1,313	6,716	1,455	3,028	1,174	160	68	27	44		13,985	1,091
Total	368,294	148,310	163,752	247,546	160,789	8,218	51,773	19,371	9,549	198	1,177,800	50,421
Available for conversion	365,493	148,310	163,550	247,120	160,038	8,218	51,480	19,241	9,549	198	1,173,197	50,392
	Zone 2											
Large Private	5,128	2,329	3,521	4,550	2,869	104	557				19,058	378
Small Private	2,463	16,316	6,162	14,470	2,566	50	114	4	1		42,146	780
State	1,090	7,353	3,070	8,353	748	91	35		28		20,768	1,129
County	1,141	1,147	2,928	3,120	828	12	27				9,203	218
National Forest (available)	7,869	1,833	9,518	24,564	7,147	30	3,015	2,614	1,158		57,748	89
Public Domain	2,593	5,868	4,113	8,755	2,814	34	16		6		24,199	50
Total	20,284	34,846	29,312	63,812	16,972	321	3,764	2,618	1,193		173,122	2,644
	Zone 3											
Small Private	42	74	815	756	104				42		1,833	
Public Domain	23	116	460	724	59				24		1,406	
Total	65	190	1,275	1,480	163				66		3,239	
Grand Total	388,643	183,346	194,339	312,838	177,924	8,539	55,537	21,989	10,808	198	1,354,161	53,065
Grand Total Available for conversion	385,842	183,346	194,137	312,412	177,173	8,539	55,244	21,859	10,808	198	1,349,558	53,036

° Includes volume in cedar-white fir merchantable pole stands.
°° Includes some alpine fir.

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Table 5.- VOLUME OF SAWTIMBER IN SAWLOG STANDS BY TYPE, ZONE AND SPECIES
KOOTENAI COUNTY, IDAHO

Timber type	Volume by species - thousand board feet net log scale (Scribner Dec. C)											Pieces
	Western white pine	Ponderosa pine	Western larch	Douglas fir	White° fir	Western red cedar	Western hemlock	Engelmann spruce	Lodgepole pine	Northern black cottonwood	Total	Cedar poles
	Zone 1											
Western white pine	357,131	7,284	96,052	133,593	117,147	5,936	44,320	18,165	8,303		787,931	31,459
Ponderosa pine-pure	23	42,123	56	4,965	39						47,206	
Ponderosa pine-mixed	2,704	92,448	22,048	43,461	6,623	428	369				168,081	6,157
Larch-Douglas fir	6,660	5,773	42,349	54,991	22,242	253	3,006	1,068	793		137,135	5,557
Hemlock-white fir	1,279	155	2,059	4,706	11,291	1,135	3,628	129	44		24,426	3,446
Douglas fir	81	427	464	4,960	553		210	9	118		6,822	99
Lodgepole pine	22		8	79	112		10		291		522	
Cedar-white fir°°	394	100	716	791	2,782	466	230				5,479	3,703
Cottonwood										198	198	
Total	368,294	148,310	163,752	247,546	160,789	8,218	51,773	19,371	9,549	198	1,177,800	50,421
	Zone 2											
Western white pine	15,019	176	5,638	5,048	7,452	28	1,185	321	177		35,044	
Ponderosa pine-pure		14,336	607	2,690							17,633	
Ponderosa pine-mixed	671	16,888	2,210	9,281	455	136					29,641	2,136
Larch-Douglas fir	3,875	3,097	19,754	37,352	6,839	18	2,434	2,135	818		76,322	105
Hemlock-white fir	36		161	276	763		31				1,267	
Douglas fir	450	314	570	8,441	529		114	162	13		10,593	
Lodgepole pine			26	30					185		241	
Cedar-white fir°°	233	35	346	694	934	139					2,381	403
Total	20,284	34,846	29,312	63,812	16,972	321	3,764	2,618	1,193		173,122	2,644
	Zone 3											
Larch-Douglas fir	65		1,275	720	163				66		2,289	
Douglas fir		190		760							950	
Total	65	190	1,275	1,480	163				66		3,239	
Grand Total	388,643	183,346	194,339	312,838	177,924	8,539	55,537	21,989	10,808	198	1,354,161	53,065

° Includes some alpine fir.
°° Includes volume in merchantable pole stands.

Data as of 1937

Table 6.- CLASSIFICATION OF IMMATURE TIMBER TYPES ACCORDING TO DENSITY OF STOCKING
KOOTENAI COUNTY, IDAHO

Timber° Type	Pole							
	Well Stocked		Medium Stocked		Poorly Stocked		Total	
	Acres	%	Acres	%	Acres	%	Acres	%
Western white pine	43,762	65	14,052	21	9,590	14	67,404	100
Ponderosa pine-pure	3,213	29	3,934	36	3,793	35	10,940	100
Ponderosa pine-mixed	22,468	18	45,294	36	56,570	46	124,332	100
Larch-Douglas fir	59,698	65	22,458	25	9,497	10	91,653	100
Hemlock-white fir	1,965	49	941	24	1,074	27	3,980	100
Douglas fir	17,916	69	4,499	17	3,742	14	26,157	100
Lodgepole pine	3,615	84	693	16			4,308	100
Western red cedar°°								
Cedar-white fir	1,411	49	1,170	41	292	10	2,873	100
Total	154,048	46	93,041	28	84,558	26	331,647	100

Timber° Type	Seedling and Sapling							
	Well Stocked		Medium Stocked		Poorly Stocked		Total	
	Acres	%	Acres	%	Acres	%	Acres	%
Western white pine	13,300	56	4,953	21	5,585	23	23,838	100
Ponderosa pine-pure	851	41	778	37	454	22	2,083	100
Ponderosa pine-mixed	5,778	28	7,078	35	7,543	37	20,399	100
Larch-Douglas fir	12,898	38	13,743	40	7,285	22	33,926	100
Hemlock-white fir	170	51			165	49	335	100
Douglas fir	1,551	32	2,971	61	327	7	4,849	100
Lodgepole pine	9,295	63	4,169	28	1,387	9	14,851	100
Western red cedar°°					66	100	66	100
Cedar-white fir	679	100					679	100
Total	44,522	44	33,692	33	22,812	23	101,026	100

Timber° Type	Total Pole, Seedling and Sapling							
	Well Stocked		Medium Stocked		Poorly Stocked		Total	
	Acres	%	Acres	%	Acres	%	Acres	%
Western white pine	57,062	63	19,005	20	15,175	17	91,242	100
Ponderosa pine-pure	4,064	31	4,712	36	4,247	33	13,023	100
Ponderosa pine-mixed	28,246	20	52,372	36	64,113	44	144,731	100
Larch-Douglas fir	72,596	58	36,201	29	16,782	13	125,579	100
Hemlock-white fir	2,135	49	941	22	1,239	29	4,315	100
Douglas fir	19,467	63	7,470	24	4,069	13	31,006	100
Lodgepole pine	12,910	68	4,862	25	1,387	7	19,159	100
Western red cedar					66	100	66	100
Cedar-white fir	2,090	59	1,170	33	292	8	3,552	100
Total	198,570	46	126,733	29	107,370	25	432,673	100

° The cottonwood type is not classified as to stocking. Data as of 1937
°° Small poles (6 to 12 or 14 inches) included with seedling and sapling.

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Table 7.- CLASSIFICATION OF STOCKED TIMBERLANDS ACCORDING TO TYPE AND SITE QUALITY
KOOTENAI COUNTY, IDAHO

Area in Acres

Timber° Type	Site number					Total	Average site
	I	II	III	IV	V		
Western white pine	3,493	36,651	96,657	4,878	125	141,804	II and III
Ponderosa pine-pure		224	2,352	17,206		19,782	IV
Ponderosa pine-mixed		3,090	48,871	112,764	3,013	167,738	III and IV
Larch-Douglas fir	424	8,154	114,272	23,544		146,394	III
Hemlock-white fir		51	4,346	1,573		5,970	III
Douglas fir		541	28,867	4,107	106	33,621	III
Lodgepole pine		2,288	15,781	1,238		19,307	III
Western red cedar		66				66	II
Cedar-white fir		893	2,973	699		4,565	III
Total	3,917	51,958	314,119	166,009	3,244	539,247	

°The cottonwood type is not classified as to site.

Data as of 1937

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Table 8.- CLASSIFICATION OF STOCKED TIMBERLANDS ACCORDING TO TYPE AND AGE CLASS
ZONES ONE AND TWO
KOOTENAI COUNTY, IDAHO

Area in Acres

Timber Type°	Age class - years						Total
	0-40	41-80	81-120	121-160	161-200	200+	
Western white pine	37,550	49,437	7,298	15,543	19,003	12,902	141,733
Ponderosa pine-pure	7,405	5,534	321	1,255	1,994	3,273	19,782
Ponderosa pine-mixed	54,242	71,879	20,655	2,574	3,775	14,613	167,738
Larch-Douglas fir	58,122	60,028	10,264	6,623	6,146	4,584	145,767
Hemlock-white fir	407	2,691	1,578	734	481	57	5,948
Douglas fir	8,964	19,976	2,666	1,057	179	684	33,526
Lodgepole pine	17,708	1,286	98	178	37		19,307
Western red cedar		66					66
Cedar-white fir	879	2,620	279	33	58	696	4,565
Total	185,277	213,517	43,159	27,997	31,673	36,809	538,432

° The cottonwood type is not classified as to age.

Data as of 1937

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Table 9 AVERAGE ANNUAL CUTTING DEPLETION FROM THE GREEN TIMBER RESOURCES BY TREE SIZE, SPECIES AND PRODUCTS KOOTENAI COUNTY, IDAHO

Product	White pine	Ponderosa pine	Larch	Douglas fir	White fir	Cedar	Hemlock	Engelmann spruce	Lodgepole pine	Cotton-wood	Total
From trees of sawtimber size (thousand board feet, Scribner Dec. C, log scale)											
Sawlogs 1/	38,585	16,296	8,306	9,068	6,389	859	30	409		134	80,076
Fuelwood 2/		6,108	3,858	3,618						162	13,746
Fence Posts 2/						213					213
Pulpwood 3/					1,621			444			2,065
Shingles 4/						956					956
Mine Timbers 5/		145	1,484	1,794			35				3,458
Total	38,585	22,549	13,648	14,480	8,010	2,028	65	853		296	100,514
From trees of less than sawtimber size (cubic feet)											
Fuelwood 2/		55,384	165,894	155,574					323,360	3,096	703,308
Fence Posts 2/		12,388	18,479			5,105					35,972
Mine Timbers 5/			14,006	16,938			326				31,270
Poles 6/						125,875					125,875
Total		67,772	198,379	172,512		130,980	326		323,360	3,096	896,425

1/ 1925-1936 inclusive.
2/ From a special survey in 1935.
3/ 1927-1934 inclusive.
4/ 1925-1934 inclusive.
5/ 1928-1932 inclusive.
6/ 1927-1929-1931-1933.

Glossary

NONFOREST LAND TYPES

Townsites - includes both incorporated and unincorporated urban settlements.

Cultivated - areas cleared and/or cultivated for agricultural use, including pasture.

Stump pasture - logged off or burned off lands, part of operating farm units, now chiefly devoted to grazing and from which stumps or snags have not been removed.

Barrens - areas too rocky, too scanty as to soil, or too exposed, to support a vegetative cover of either trees, shrubs, or herbs.

Grass - areas such as parks, mountain meadows, or treeless ridges, whose principal vegetation is grass and herbs.

Brush - areas whose principal vegetation is sagebrush, brush, or shrubs as a permenent type.

FOREST LAND TYPES

Timberland - forest areas capable of producing trees of commercial species and quality.

Producing timberland - timberland areas containing forest growth, or if not, which have been denuded since 1925.

Deforested timberland - nonrestocked old burns or cut-overs denuded prior to 1925.

Subalpine - stands above the altitude range of merchantability.

Rocky noncommercial - areas too steep, sterile, or rocky to produce merchantable timber.

Sawlog stands - timber stands containing 3 thousand board feet per acre for the ponderosa pine and lodgepole pine types or 4 thousand board feet for the other types, except cottonwood, in trees of sawlog size. The cottonwood type has no minimum limit. The minimum size classes for sawlog trees are: white pine, ponderosa pine, lodgepole pine - 12 inches, cedar - 24 inches, and other species - 14 inches (diameter breast high).

Merchantable pole stands - cedar or cedar-white fir stands containing 8 or more commercial cedar poles to the acre (12 to 24 inches diameter breast high).

Other pole stands - timber stands in which the majority of the dominant trees are between 6 inches and merchantable size.

Seedling or sapling stands - timber stands in which the majority of the dominant trees are less than 6 inches.

Recent burns and cut-overs - areas cut or burned since 1925 for which sufficient time has not elapsed to allow classification into one of the other timber types.

Reserved areas - includes publicly owned forest lands not available for conversion into timber products but reserved for parks, primitive areas, protection of municipal watersheds, etc.

Zones - Zone One includes areas loggable under present conditions.

Zone Two includes areas loggable with increased stumpage values.

Zone Three includes areas of no probable value for timber production.

Site class - the index of the productivity of an area for growing forests. There are 5 or 6 site classes with the best sites numbered one, the next best two, etc.

Stocking - in young timber stands stocking is the measure of the extent to which an area is covered with forest growth. The degrees of stocking are:

Less than 10 percent stocked	= unstocked
10 to 39 percent stocked	= poorly stocked
40 to 69 percent stocked	= medium stocked
70 to 100 percent stocked	= well stocked